

KANGAROO ISLAND FERAL CAT ERADICATION INITIATIVE

FREQUENTLY ASKED QUESTIONS

What is the KI feral cat eradication initiative?

The goal of the Kangaroo Island Feral Cat Eradication Initiative (the initiative) is to eradicate feral cats from Kangaroo Island (KI) by 2030. The initiative is being led by the Department of Environment, Water and Natural Resources (DEWNR) and KI Natural Resources Management Board (the Board), collectively known as Natural Resources Kangaroo Island (NRKI) and the Kangaroo Island Council (Council) and is supported by all levels of government.

The initiatives objectives in support of this goal are to:

- Protect Kangaroo Island's unique wildlife and ecosystems (from unnatural predation and toxoplasmosis, which is spread by feral cats)
- Protect livestock health (from sarcocystis and toxoplasmosis, which is spread by feral cats) and hence primary production income
- Enhance the value of the Kangaroo Island brand (clean and green, natural, pristine)
- Improve ecotourism credibility
- Reduce the social impacts of feral cats
- Maintain and support community and stakeholder involvement in the eradication of feral cats from Kangaroo Island
- Ensure that domestic cats do not contribute to the feral cat problem through good legislation and adherence to local government by-laws.

A phased approach has been adopted. In this first phase (2016-2019), baseline monitoring of feral cats and native wildlife is being undertaken to ensure a good understanding of animal populations and dynamics. Possible control methods are also being investigated and trialed. Providing the first phase is successful and further initiative funding is secured, the second phase will focus on eradicating feral cats from the Dudley Peninsula and the third phase will focus on eradicating feral cats from the rest of the Island.

How is the initiative governed?

The initiative is overseen by a steering committee with representation from the Board, DEWNR, the Royal Society for the Prevention of Cruelty to Animals (RSPCA), and Primary Industries and Regions South Australia (PIRSA). It receives technical support from the Invasive Animals Cooperative Research Centre, Ecological Horizons, Terrain Ecology, a wider range of national and international experts, and various academic institutions through related research projects.

How many feral cats are there on KI?

The population is estimated at around 5,000 feral cats. There is strong evidence to suggest that densities are higher on the Island than the mainland. Even in low numbers feral cats can have a devastating effect



on native wildlife.

Why is Kangaroo Island appropriate for feral cat eradication?

Firstly, being an island provides the opportunity for more effective biosecurity as there are fewer ways for pest plants and animals to be reintroduced. Secondly, the unique geographic feature of the Dudley Peninsula isthmus allows the island to be divided into two management units for targeted eradication, a crucial factor in KI's initial ability to attract project funding. Thirdly, over the last decade and with state and Australian government support, NRKI has successfully invested in programs to control feral animals across the Island. By working closely with the community, feral goats and deer have almost been eradicated. Kangaroo Island is also fortunate to be free from foxes, rabbits and wild dogs.

In June 2016, the Australian Government confirmed its support for making Kangaroo Island a safe haven for wildlife, together with the other four priority Islands, Bruny Island, French Island, Christmas Island and Dirk Hartog Island.

Is the community in support of feral cat eradication?

Community support for feral cat eradication is critical to the success of the initiative, especially given the extent of the problem and the timeframes and costs associated with complete eradication. At a general level, eradication is supported by the conservation sector as well as the primary production sector, given the devastating consequences feral cats have for both of these. Improved outcomes for these sectors are also of benefit to the Island's tourism sector, which relies on a healthy environment and the positive positioning of primary production.

Before the initiatives start-up, a community survey was conducted. Of the 600 responses, 87% supported strengthened domestic cat management and 95% agreed with the plan to eradicate feral cats by 2030. The survey is ongoing and can be completed by going to <https://www.surveymonkey.com/r/Klcatsurvey2015>.

What does the initiative mean for domestic cat ownership?

Domestic cat management is currently regulated by council by-laws, which require domestic cats to be registered, desexed, micro-chipped and kept indoors or in an enclosure. Cat breeding is also strictly regulated by council by-laws.

As feral cat eradication will be a costly and lengthy process, domestic cat ownership is considered to pose a significant risk to the initiatives success, increasing the chance of a feral cat population re-establishing on the Island. The domestic cat by-law management will be led by the Council and amendments to the by-laws will take place in a staged manner over the life of the initiative, in consultation with the KI community.

What activities are under way in this first year of the feral cat eradication initiative?

The initiative has secured Australian Government project funding with NRKI in kind support for project activities on the Dudley Peninsula isthmus during 2016 - 2017.

Project activities include:

- feral cat population abundance estimate in study area through camera trapping
- radio collaring (VHF and GPS collars) up to 20 feral cats to gain insights into movements, home ranges, survivorship of kittens (to aid in understanding population dynamics), efficacy of control techniques and territory re-invasion rates



- grooming trap trials in non-toxic mode
- detector dog trials
- cage trapping trials with camera traps using various baits and cage types
- camera trapping non-toxic bait trials through each season
- camera trapping lure trials through each season
- baseline rodent surveys (to compare to rodent numbers once feral cat eradication begins)
- baseline wildlife surveys (to compare to wildlife numbers once feral cat eradication begins).

How much will this cost and who will pay for it?

Stage one will cost \$2,480,000 (three years). Stage two (2018-2021) and three (2021-2030) will be costed once Stage one is near completion.

The initiative is fully supported by the Australian Government in line with their commitment to eradicate feral cats from five priority islands around the country, including Kangaroo Island.

NRKI and Council are also promoting a sponsorship campaign to attract corporate and private investment into the initiative. Residents will not be expected to pay for the initiative, though they are most welcome to respond to the sponsorship campaign should they wish.

What role do residents have to play in feral cat eradication?

Community involvement and support is vital to the initiative. This can be achieved through:

- effective domestic cat management on your property
- recording feral cat sightings on the Feral Cat Scan App (see https://www.feralscan.org.au/feralcatscan/pagecontent.aspx?page=feralcat_homepage_kangaroo_island).

The [Feral Cat Scan App](#) was developed by the Invasive Animals CRC, with support from the Australian Government, and can be used to record sightings and impacts of feral cats on KI. The app facilitates community involvement in the initiative, providing important information on feral cat distribution and hot spots.

It is also anticipated that once the initiative is in full eradication mode, technically and ethically trained landholders will be encouraged to assist in the eradication in various ways.

Won't mice and rat numbers increase without feral cats?

While cats are known to eat mice and rats there is not a lot of evidence to suggest that they have a big role to play in regulating their numbers. If mice and rats do increase in numbers it is anticipated that native predators, e.g. goannas and owls, will increase and control their numbers. Either way, the initiative is currently collecting baseline information on rodent and native wildlife populations and will be monitoring for changes to these once feral cat eradication commences.

Why is the initiative designed to run for 15 years – can't you eradicate feral cats quicker than that?

We need to make sure the initiative is properly designed and thoroughly implemented. A range of tested and untested techniques and combinations need to be trialed on the Island. Few techniques have previously been trialed or used on a landscape scale. The phased process means that we will implement a



well thought out and integrated eradication program that includes ongoing monitoring, evaluating and improving.

Will you be fencing off Dudley Peninsula?

Kangaroo Island is the largest island in the world to ever embark on a feral cat eradication initiative. Dividing the island into two management units increases the likelihood of success and makes the undertaking more manageable. This was one of the primary reasons KI was able to attract funding for the initiative. As the second stage of the initiative aims to eradicate feral cats from the Dudley Peninsula, this outcome will be protected by the erection of a feral cat exclusion barrier across the isthmus.

Feral cat proof fences have been built in a variety of locations across Australia in very similar situations to the Dudley Peninsula isthmus. The barrier fence will be a temporary measure and will be removed once feral cats have been eradicated. It is anticipated that the fence will be constructed from beyond the low tide mark in Pelican Lagoon on its northern end to a cliff that drops directly into the sea on its southern end. The routing of the fence will take pedestrian and vehicle access for all adjoining properties into consideration, together with other relevant issues.

The fence will be constructed from 50mm gauge wire mesh and held in place by heavy duty 2.1m star pickets which will be spaced 4 m apart. The fence will be 1.8 m in height and will have a 60 cm curved 'floppy' top shaped and secured by heavy duty twitching wire. The floppy top will be placed on both sides of the fence to prevent any cats crossing from either side. A 30 cm apron will be secured into the ground on both sides of the fence to prevent digging animals such as echidnas from creating holes under the fence. Two solar powered electric wires will also be suspended from the fence at heights of 120 cm and 150 cm and will have a voltage of 7 kV, which is insufficient to electrocute wildlife and will only act as a deterrent to animals that touch it.

Where the fence crosses Hog Bay Road, an aversion grid will be installed that repels cats from moving through the gap. This grid is being developed by innovative designers and will have inbuilt audio, visual and other sensory aversive stimuli. Should it be decided that further gaps in the fence are desirable, e.g. to allow for wildlife movement at other points along the fence-line, then such aversion grids may also be used to stop cat movement through the gaps.

How might the fence impact on native wildlife?

To prevent the funneling of wildlife through the gap in the fence where it crosses Hog Bay Road, virtual aversion fences will be established for 1 km stretches of Hog Bay Road on both sides of the gap (East and West) and on both sides of the road. This will be achieved through the placement of audio deterrents on existing reflector road side posts. When a vehicle travels on the road, the aversion stimuli are activated, moving animals away from the road. If there are no vehicles travelling on the road the aversion stimuli will not be activated and animals will not be deterred from crossing the road. These virtual fences have proved to be highly successful in other places where they have been used to reduce roadkill. It should also be noted that there are fences all over the island that impact wildlife, and particularly macropod, movement.

The barrier fence itself is not anticipated to impact negatively on native wildlife. Animals rapidly become habituated to fences and adjust their movements and home ranges accordingly. Similar fences have been used on other parts of the island to protect revegetation works with no adverse impacts observed. Further, expert opinion does not indicate any concerns about limiting genetic flows given the relatively limited period of time that the fence will be in place. There is also the possibility that gaps will be created for the



movement of animals other than cats and that some animals would be able to cross the cat aversion grid at the gap across Hog Bay Road itself when vehicles are not moving on the road.

Will the virtual fences disturb people living near them?

No. Experience in other places where virtual fences have been used indicates no or limited sound disturbance. Further, the devices can be adjusted to drop volume levels should this be required.

Why build the fence if future funding for the initiative is not assured and eradication techniques are still being trialed?

The initiative is fully supported by the Australian Government in line with their commitment to eradicate feral cats from five priority islands around the country, including Kangaroo Island. Installing the fence will send a clear signal that Kangaroo Island is strongly committed to feral cat eradication and working through the various challenges associated with this in a methodical and cohesive manner, also putting it ahead of some of the other islands that are gearing up for feral cat eradication. The fence will be using cutting edge technologies, which need to be tested. Without a functional fence and grid, the initiative will not be able to move to stage two. DEWNR also fully supports the initiative and provides in-kind support.

Who will pay for the maintenance of the fence and its removal when required?

The initiative funds will be used to cover these costs, with DEWNR taking full responsibility for the installation, maintenance and removal of the fence.

What issues have been taken into account in aligning the fence?

A suite of issues have been taken into account in deciding on the best option for fence alignment, including terrain, access, land tenure and ownership, and native vegetation.

How will access to properties be affected and will there be any road closures as a result of the alignment of the fence?

Access to properties is assured though there may be changes to existing arrangements, to be negotiated with landholders. In some instances road re-alignment will be required. The old Hog Bay Road will need to be closed, though access to parts of it will be made possible.

Why not offer a bounty for feral cats?

The eradication of feral cats on KI is a very big job and will be the largest feral cat eradication ever undertaken in the world. We are investigating the best techniques to use across the island in a systematic way. We need to ensure that we can achieve our goal efficiently and cost-effectively and that other parts of the country are able to learn from what we do.

Euthanising cats by spotlight shooting can be a useful way of temporarily reducing cat numbers at local levels, but will not be effective at removing all cats on the Island due to its size. Radio telemetry data is showing us that feral cats live in all habitats on KI, including some of the thickest bushland and remotest parts – not just along roads and farmland where they can be more easily shot.

The full eradication of feral cats is costly and we need to be able to provide monitoring data to funders to show that progress is being made, that outcomes are positive, and finally that feral cats have been fully eradicated. If we don't do the job properly the feral cat population will simply grow again and the money



and effort will have been wasted.

What new technologies are you looking at?

The initiative will trial a range of existing feral cat control techniques (e.g. baiting, trapping, shooting) as well as new and innovative tools, such as the grooming trap, cat detection dogs and measure potential impacts on non-target species.

Ecological Horizon's cat grooming trap was developed by Dr John Read and is currently being tested on the mainland as well as on the Island to ensure it can differentiate effectively between different animals, including detecting micro-chipped animals. This would enable the device to administer a toxin on a selective basis, avoiding non-target species. Kangaroo Island presents the ideal location to trial the grooming trap with abundant cats and similarly sized non target species such as Tammar wallabies and brush-tailed possums. <http://www.ecologicalhorizons.com/initiatives#feralcatgroomingtrap>

All trials on Kangaroo Island are being undertaken in remote areas outside of townships to reduce the risk of domestic cats being in the trial area (though trials are not currently using toxic baits and domestic cats should be enclosed at all times in accordance with council by-laws).

How can the grooming trap distinguish between cats and native wildlife?

The grooming trap employs multiple sensors to detect the presence and type of animal. Scientists have spent more than two years refining the mechanics of the spray device to ensure it is activated only when cat specific sensors are triggered. If a cat does trigger the device, it would then be sprayed with the toxin, which it would ingest after grooming itself. This factor also renders the device more specific to cats as they groom themselves prolifically while native wildlife rarely do. Trials at Venus Bay and have proven that the device is safe for bettongs, bilbies and kangaroos. In the Flinders Ranges, they have been shown to be safe for quolls and possums. As seen in the image, the camera has been activated to take a photograph but the spray device has not been triggered because only the bottom sensor has been activated. Before any toxins are used by the initiative, the grooming trap will be exhaustively, locally trialed to ensure it is specific to cats and is not regularly or ever triggered by non-target species.



Natural Resources
Kangaroo Island



Government of South Australia
Kangaroo Island Natural
Resources Management Board

Will you be using 1080 baiting methods?

The only available toxin registered for use in feral cat control projects in Australia is 1080. When ingested by carnivores, such as cats and foxes, 1080 causes central nervous system malfunction and usually results in respiratory failure. There is much disagreement and uncertainty about the welfare impacts of 1080 poisoning and it is uncertain whether they are conscious during and after the convulsions. Because 1080 poisoning disrupts two major neurotransmitter pathways and reduces the ability to feel pain in the spinal cord, it has been argued that animals are unlikely to feel pain despite the disturbing behaviour. Whether in a grooming trap or in a bait, a cat specific amount of toxin is used so that potential harm to native species is significantly reduced. Native animals generally have a greater tolerance to 1080 than introduced species and non-target and secondary poisoning incidences can be reduced by careful administration of the right amounts of the toxin. For more information please see <https://invasives.org.au/blog/1080-and-animal-welfare-a-complicated-equation/>

It is anticipated that Para-aminopropiophenone (PAPP) will be trialed on the Island when it becomes registered for use by the Australian Pharmaceutical and Veterinary Medicines Authority. PAPP disrupts transport of oxygen to tissues such as the heart and brain, which results in affected animals quickly losing consciousness with little obvious symptoms. Death after PAPP poisoning is much quicker than death from 1080 and is therefore considered to be a more humane method of feral cat control.

The region may trial Eradecat® which contains the toxin 1080 or Curiosity® baits (containing PAPP). This would be subject to trials that are already taking place on the mainland and registration approval in South Australia. Non-toxic bait trials of Eradecat® and meat baits will occur seasonally to monitor the uptake of baits from feral cats and non-target species. For toxic baiting to take place on KI, the initiative must provide unequivocal data to prove that non-target species will not be adversely affected.

NB. The initiative will be guided in its approach by the steering committee and the RSPCA endorsed *Model code of practice for the humane control of feral cats* and *standard operating procedures in the eradication of the feral cat*.

How will the initiative use Detector Dogs?

The initiative will trial detector dogs as a way of locating feral cats in the landscape so that they can be humanely euthanised. Initiative contractors are training detector dogs to national standards for trialing in areas where radio-collared feral cats are located. These dogs will be under the control of their handler at all times and are trained to only locate the feral cat, not to capture and kill it. A variety of handlers and dogs will be trialed in stage one.

How will Council assist in the eradication process?

The Kangaroo Island Council will be predominantly involved in cat management in urban and peri urban areas, ensuring that domestic cats do not contribute to the feral cat problem through ensuring there is good legislation and adherence to the local government by-laws.

Does the Dog and Cat Management Board support this initiative?

The Dog and Cat Management Board provides support and advice to local councils and the community on responsible cat ownership and management. The Board recognises the importance of managing feral cats



to reduce the threat they pose to native wildlife and to minimise the number of homeless cats which suffer starvation, disease and injury living in the wild.

What if you can't kill enough cats using the current techniques?

We will investigate all available control options. If not successful we will delay onset of phase 2.

How does this fit in with the Australian Government Threatened Species Strategy?

As an extinction driver for so many of our native animals, and a threat that has been relatively neglected in the past, tackling the threat of feral cats is the highest priority of the TS strategy.

The Threatened Species strategy states that safe havens provide threatened plants and animals with long-term protection from threats and create areas where risks to specific plants and animals can be removed, not just managed. Within these areas, species are able to thrive and increase their numbers without the pressure of threats. Safe havens that the Australian Government will aim to promote and protect include Kangaroo Island.

The Government is acting now and will immediately scale up evidence-based action and innovative measures to manage the impact of feral cats. Forward actions will include:

- development and deployment of Curiosity®, the new humane feral cat bait
- working with protected area partners to increase feral cat management in reserves
- supporting the establishment of feral-free areas and feral cat free islands as safe havens for threatened species
- trapping by Green Army teams and through the National Landcare Program
- intense feral cat management at significant species locations, such as breeding sites
- working with local councils and regional NRM organisations to scale up cat eradication and cat management programs
- supporting community-led initiatives and citizen science
- exploring new and innovative management techniques
- utilising the National Environmental Science Program (NESP) to explore emerging scientific opportunities.

The strategy, which is consistent with the new feral cat Threat Abatement Plan, focuses on delivering four feral cat targets:

- eradication of feral cats from five islands including Kangaroo Island
- ten feral cat free mainland exclosures established
- best practice feral cat control established across 10 million hectares of open landscapes
- best practice feral cat control implemented in 2 million hectares of Commonwealth land.

An initial group of ten threatened mammals and ten threatened birds have been identified for action. Within this group is the threatened Kangaroo Island dunnart and the hooded plover. A number of actions will be implemented to reduce predation on these species including.

- building fenced areas
- habitat improvement
- captive breeding
- translocations
- invasive species control



- disease mitigation
- improved fire management practices
- native predator reintroduction.

An intensive study taking place through the Threatened Species Recovery Hub has commenced and is focusing on the ecology of the KI Dunnart and the impacts feral cats have on this species.

The Threatened Species Strategy has a feral cat destruction target of 20 million feral cats by 2020.

